

Kindly enter the following amendments:

**IN THE CLAIMS:**

Please cancel claim 12 without prejudice or disclaimer of the subject matter thereof.

Please amend Claims 1 - 11 and 13- 20 as follows:

*Sub C*

1. A method for forming a semiconductor device having a laminated structure of a dielectric film made from a metal oxide which is formed on a surface of a substrate and a CVD high melting point metal nitride film directly formed thereover, wherein said [dielectric] metal nitride film is directly formed on said dielectric film by introducing a source gas containing said high melting point metal into a chamber in which said substrate is contained,

*A*

said method comprising a step of treating said substrate in said chamber with at least [either] one of a gas non-reactive with respect to said metal oxide contained in said dielectric film and NH<sub>3</sub> gas, [with]

keeping said temperature of said substrate at a prescribed temperature, before said source gas containing said high melting point metal is introduced into said chamber.

2. [A] The method for forming a semiconductor device according to claim 1, wherein said treating step [serving as] includes a flow stabilizing step for [stabilize] a gas flow [used] in said chamber.

3. [A] The method for forming a semiconductor device according to claim 2, wherein said non-reactive gas is introduced [in] during said flow stabilizing step.

4. [A] The method for forming a semiconductor device according to claim 1, wherein said treating step [comprising] includes a step for heating said substrate, and said flow stabilizing step [which] is performed after said heating step has been completed.

5. [A] The method for forming a semiconductor device according to claim 4, wherein said NH<sub>3</sub> gas is introduced into said chamber [in] during said heating step.

6. [A] The method for forming a semiconductor device according to claim 5, wherein said NH<sub>3</sub> gas has a NH<sub>3</sub> partial pressure atmosphere of no greater than 1.0 Torr and no less than 0.1 Torr.

7. [A] The method for forming a semiconductor device according to claim 5, wherein said non-reactive gas and said NH<sub>3</sub> gas are introduced into said chamber [in] during said flow stabilizing step.

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8. A method for forming a semiconductor device having a laminated structure of a dielectric made from a metal oxide and a CVD high melting point metal nitride film formed thereover, wherein said [dielectric] metal nitride film is directly formed on said dielectric film by introducing a source gas containing said high melting point metal into a chamber in which said substrate is contained, said method comprising:

heating [of] a substrate onto which said dielectric film is formed to a prescribed temperature in an NH<sub>3</sub> atmosphere of no greater partial pressure than 1.0 Torr and no less than 0.1 Torr before the introduction of said source gas containing said high melting point metal.

9. [A] The method for manufacturing a semiconductor device according to claim 8, said method further comprising prior to the introduction of said source gas:

a step of heating [a] said substrate to a prescribed temperature; and  
a step of maintaining said substrate temperature [as] in a gas ambient non-reactive with respect to said metal oxide [tantalum oxide is introduced] and the flow thereof is stabilized,

[said steps being performed before the introduction of a source gas containing a high melting point metal,] and said NH<sub>3</sub> gas being introduced [in either] during at least one of said substrate heating step [or] and said flow stabilization step.

10. [A] The method for manufacturing a semiconductor device according to claim 9,  
said method further comprising;

a step of introducing [a] said source gas containing [a] said high melting point metal, and growing a CVD high melting point metal nitride film after performing said flow stabilization step: and

a step of raising the partial pressure of the NH<sub>3</sub> gas [in the latter] during a second half of the CVD film growing step so that annealing is done by the NH<sub>3</sub> gas.

11. [A] The method for manufacturing a semiconductor device according to claim 1,  
[wherein] said method further comprising;

a step, performed before said CVD high melting point metal nitride film forming step, of heating a substrate onto which said dielectric film is formed, in said chamber by introducing therein said non-reactive gas; and

a step of forming said high melting point metal nitride film on said dielectric film by introducing a [mixtured] gas mixture comprising said NH<sub>3</sub> gas and said non-reactive gas, said nonreactive gas [the] in an amount [of which is identical] equal to or [relatively] larger than [that of] said NH<sub>3</sub> gas, and said source gas containing said high melting point metal [the] in an amount [of which being relatively smaller] less than [those of] said NH<sub>3</sub> gas and said non-reactive gas.

13. [A] The method for forming a semiconductor device according to claim 1, wherein said dielectric film is a tantalum oxide ( $Ta_2O_5$ ) film.

14. [A] The method for forming a semiconductor device according to claim 1, wherein said substrate is heated to a temperature [of at least] between approximately 400°C and [no greater than] 700°C.

15. [A] The method for forming a semiconductor device according to claim 1, wherein said non-reactive gas is one gas selected from [a rarified gas including] nitrogen, argon, hydrogen gas, or a mixture of these gases.

16. [A] The method for forming a semiconductor device according to claim 1, wherein said high melting point metal nitride film [is] includes a TiN film.

17. [A] The method for forming a semiconductor device according to claim 16, wherein said source gas containing titanium as said high melting point metal, is a gas selected from the group consisting of titanium tetrachloride ( $TiCl_4$ ), tetrakis dimethyl amino titanium (TDMAT), tetrakis diethyl amino titanium (TDEAT) [is used as the source gas containing titanium].

18. [A] The method for forming a semiconductor device according to claim 1, wherein said high melting point metal nitride film [is] includes a WN film, and wherein  $WF_6$  gas is introduced as a source gas containing tungsten.

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19. [A] The method for manufacturing a semiconductor device according to claim 1, wherein said semiconductor device has a capacitive element, a dielectric film [of which is a capacitive insulation film], and a CVD high melting point metal nitride film [serving] as a protective film disposed between said [capacitive insulation] dielectric film and said capacitive element.

20. [A] The method for manufacturing a semiconductor device according to claim 1, wherein said semiconductor device has a MOSFET[ the] with a gate insulation film of [which is] a dielectric film, and wherein said CVD high melting point metal nitride layer is the lowermost layer of the laminated gate electrode layer formed on said gate insulation film.

Please add new claims 21 - 29 as follows:

*A3*

21. The method for manufacturing a semiconductor device according to claim 1, further comprising:

raising the partial pressure of the NH<sub>3</sub> gas during a second half of forming said CVD film on said metal oxide, so that annealing is done by the NH<sub>3</sub> gas.

22. The method for forming a semiconductor device according to claim 9, wherein said dielectric film is a tantalum oxide (Ta<sub>2</sub>O<sub>5</sub>) film.

23. The method for forming a semiconductor device according to claim 9, wherein said substrate is heated to said prescribed temperature between approximately 400°C and 700°C.

24. The method for forming a semiconductor device according to claim 9, wherein said non-reactive gas is selected from nitrogen, argon, hydrogen gas, or a mixture of these gases.

25. The method for forming a semiconductor device according to claim 10, wherein said high melting point metal nitride film comprises a TiN film.

26. The method for forming a semiconductor device according to claim 25, wherein a source gas containing titanium as said high melting point metal, is a gas selected from the group consisting of titanium tetrachloride ( $TiCl_4$ ), tetrakis dimethyl amino titanium (TDMAT), tetrakis diethyl amino titanium (TDEAT).

27. The method for forming a semiconductor device according to claim 10, wherein said high melting point metal nitride film comprises a WN film, and wherein  $WF_6$  gas is introduced as a source gas containing tungsten.

28. The method for manufacturing a semiconductor device according to claim 8, wherein said semiconductor device has a capacitive element, a dielectric film, and a CVD high melting point metal nitride film as a protective film disposed between said dielectric film and said capacitive element.